

two anteriolateral approaches, and the pins 506a-b can be inserted into the first 550 and second 552 holes (for one of the two anteriolateral approaches) (Fig. 5p) or the first 550 and third 552 holes (for the other of the two anteriolateral approaches) (Fig. 5q) of the first hole configuration.

[00169] Also, for example, with reference to Figs. 5r-u, regarding the first hole configuration, each of the left offset repositioner/extractor 510 and the right offset repositioner/extractor 520 can be used in either a directly anterior approach (Figs. 5r,t) or a respective anteriolateral approach (Figs. 5s,u). That is, the right offset repositioner/extractor's shaft 522 can be inserted into the wound from a direct anterior approach, and the right offset repositioner/extractor's pins 526a-b can then be placed into the first 550 and second 552 holes of the first hole configuration (Fig. 5r). And, the right offset repositioner/extractor's shaft 522 can be inserted into the wound from an anteriolateral approach, and the right offset repositioner/extractor's pins 526a-b can then be placed into the first 550 and third 554 holes of the first hole configuration (Fig. 5s). And, the left offset repositioner/extractor's shaft 512 can be inserted into the wound from a direct anterior approach, and the left offset repositioner/extractor's pins 516a-b can then be placed into the first 550 and third 554 holes of the first hole configuration (Fig. 5t). And, the left offset repositioner/extractor's shaft 512 can be inserted into the wound from an anteriolateral approach, and the left offset repositioner/extractor's pins 516a-b can then be placed into the first 550 and second 552 holes of the first hole configuration (Fig. 5u). It should be noted that the alternate left offset 530 and alternate right offset 540 repositioners/extractors can also fit into the holes of the first hole configuration in the same manner as described here with regard to the left offset 510 and right offset 520 repositioners/extractors.

[00170] Also, for example, with reference to Figs. 5v-dd, regarding the second hole configuration (four holes in one of the baseplates), the symmetric repositioner/extractor 500 can be used in a directly anterior approach (Fig. 5v), and either of two anteriolateral approaches (Figs. 5w-x). That is, the symmetric repositioner/extractor's shaft 502 can be inserted into the wound from a directly anterior approach, and the pins 506a-b can be inserted into the first 560 and second 562 holes of the second hole configuration (Fig. 5v). And, the symmetric repositioner/extractor's shaft 502 can be inserted into the wound from either of the two anteriolateral approaches, and the pins 506a-b can be inserted into the first 560 and third 564 holes (for one of the two anteriolateral approaches) (Fig. 5w) or the second 562 and fourth

566 holes (for the other of the two anteriolateral approaches) (Fig. 5x) of the second hole configuration.

[00171] Also, for example, with reference to Figs. 5y-dd, regarding the second hole configuration, each of the left offset repositioner/extractor 510 and the right offset repositioner/extractor 520 can be used in any of three respective anteriolateral approaches. That is, the right offset repositioner/extractor's shaft 522 can be inserted into the wound from any of its three possible anteriolateral approaches, and the right offset repositioner/extractor's pins 526a-b can then be placed into the first 560 and second 562 holes (Fig. 5y) (for a first of the three anteriolateral approaches), the first 560 and third 564 holes (Fig. 5z) (for a second of the three anteriolateral approaches), or the second 562 and fourth 566 holes (Fig. 5aa) (for a third of the three anteriolateral approaches). And, the left offset repositioner/extractor's shaft 512 can be inserted into the wound from any of its three possible anteriolateral approaches, and the left offset repositioner/extractor's pins 516a-b can then be placed into the first 560 and second 562 holes (Fig. 5bb) (for a first of the three anteriolateral approaches), the first 560 and third 564 holes (Fig. 5cc) (for a second of the three anteriolateral approaches), or the second 562 and fourth 566 holes (Fig. 5dd) (for a third of the three anteriolateral approaches). It should be noted that the alternate left offset 530 and alternate right offset 540 repositioners/extractors can also fit into the holes of the second hole configuration in the same manner as described here with regard to the left offset 510 and right offset 520 repositioners/extractors.

[00172] It should be noted from the illustrations in Figs. 5p-dd that the anteriolateral approaches are at a variety of angles relative to the anterior-posterior plane, and further that the illustrated angles are merely exemplary. That is, the invention encompasses additional approach angles, in that such additional approach angles are possible by (as described above) adding or deleting holes, and/or changing the location of holes, and/or changing the spacing between holes (in conjunction with changing the spacing between pins), and/or changing the angle at which the offset repositioner/extractors' pins are placed relative to one another and to the shaft of such repositioner/extractors.

[00173] As discussed above, once the pins are established in the two adjacent holes, manipulating the shaft of the repositioner/extractor will reposition the static trial or artificial intervertebral disc in the intervertebral space and/or extract it from the intervertebral space. The use of more than one pin (versus one pin) enables the static trial or artificial

intervertebral disc to be rotated in either direction about a longitudinal axis passing through the intervertebral space.

[00174] A preferred embodiment of a leveler of the present invention will now be described.

[00175] Referring now to Figs. 6a-e, a leveler of the present invention is shown in bottom (Fig. 6a), side (Fig. 6b), front (Fig. 6c), top partial perspective (Fig. 6d), and bottom partial perspective (Fig. 6e) views. More particularly, Fig. 6d shows a top perspective view of the distal end of the leveler, and Fig. 6e shows a bottom perspective view of the distal end of the leveler.

[00176] The leveler is provided primarily for establishing a parallel orientation of the baseplates (relative to one another), and/or securing the purchase of the stabilizing spikes, of an artificial intervertebral disc having features suitable for being manipulated by the leveler. Exemplary suitable artificial intervertebral discs are described in the '160 and '528 applications with regard to Figs. 8a-z, 9a-u, 10a-u, 11a-k, and 12a-p thereof and by the accompanying descriptions therefor (e.g., embodiments identified as the first, second, third, fourth, and fifth preferred embodiments of the fourth embodiment family, etc.). Regarding the features suitable for being manipulated by the leveler, such features include suitably formed inwardly facing surfaces of the baseplates of the artificial intervertebral disc.

[00177] More particularly, the leveler 600 includes a shaft 602 having a forked distal end formed by two opposing tongs 604a-b that are symmetric to one another about a longitudinal axis of the shaft 602. Each of the tongs 604a-b has an extent that initially curves laterally outward away from the shaft 602 and from the other tong's extent, to define a central pocket 606 forward of the shaft 602 between the tongs' extents. Each tong's extent then resumes a distal direction to become parallel to the shaft 602 and to the other tong's extent.

[00178] Each tong's extent has an upper surface 608a-b and a lower surface 610a-b. The upper surface 608a-b is preferably shaped to conform against the inwardly facing surface of a first (e.g., upper) baseplate of an artificial intervertebral disc, and the lower surface 610a-b is preferably shaped to conform against the inwardly facing surface of a second (e.g., lower) baseplate of the artificial intervertebral disc, so that insertion of the forked distal end of the leveler 600 between the baseplates, with the central pocket 606 of the distal end avoiding the central portion of the artificial intervertebral disc, and with the upper 608a-b and